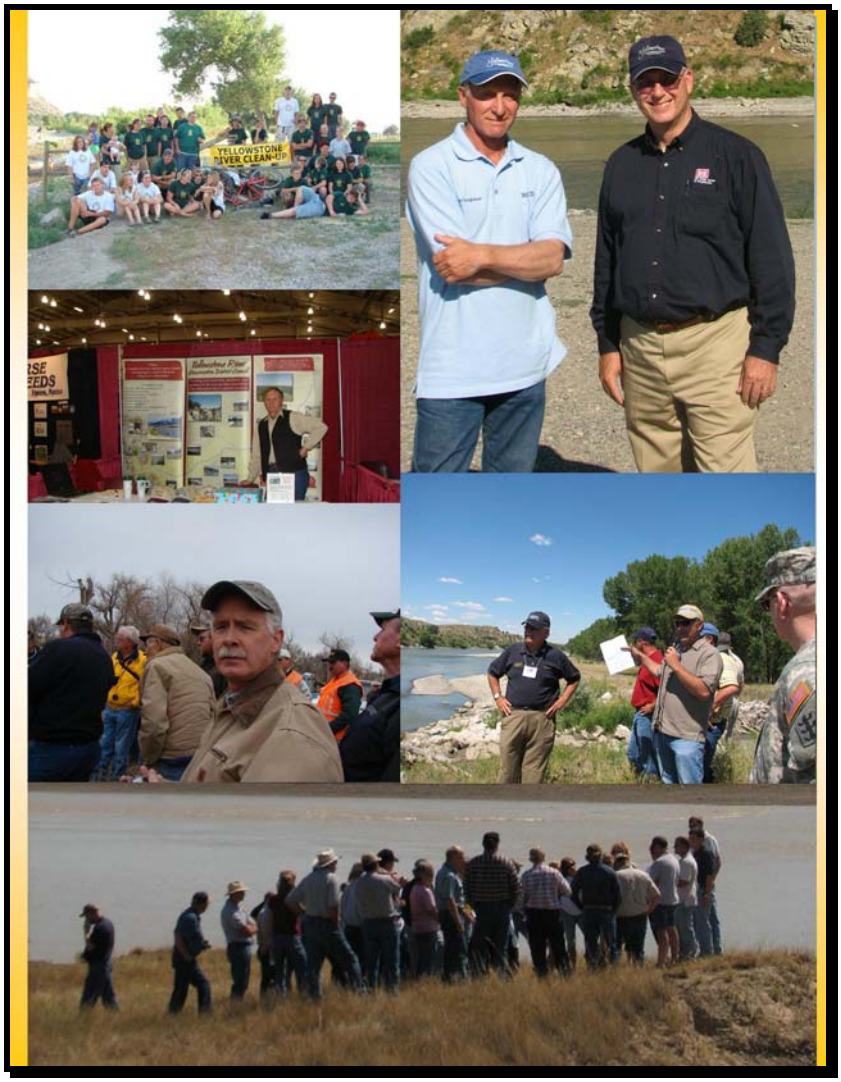
Yellowstone River

Conservation District Council



2008 Annual Report

(July 1, 2007, to June 30, 2008)
Yellowstone River Conservation District Council
Custer County Conservation District
Yellowstone River, Montana, North Dakota
YRCDC-2009-01

Suggested citation: Yellowstone River Conservation District Council. 2009. Yellowstone River Conservation District Council Annual Report, 2008. Custer County Conservation District, Miles City, Montana, YRCDC-2009-01.

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Cover photos: Top Left – Right. Yellowstone River Clean-Up (courtesy of N. McClain), Don Youngbauer and John Paul Woodley Jr. (courtesy of S. Carlson), Yellowstone River Boat Tour 2007 (courtesy of N. McClain), YRCDC field trip to Intake 2007 (courtesy of S. Carlson), Russian olive demonstration – Hysham 2007 (courtesy of N. McClain), Don Youngbauer – MATE Show (courtesy of N. McClain).

Contents

Introduction

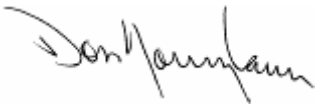
The Yellowstone River Conservation District Council (YRCDC) was formed in 1999 to address conservation issues on the Yellowstone River from Gardiner, Montana to the confluence of the Missouri River in North Dakota. The YRCDC is made up of 13 members; twelve are from conservation districts bordering the main stem of the Yellowstone River, including McKenzie County, North Dakota. A thirteenth member represents the YRCDC resource advisory committee. In 2004, the YRCDC entered into a cost-share agreement with the Corps of Engineers on the Yellowstone River Cumulative Effects Study, perhaps the largest and most comprehensive study ever done on the Yellowstone. The YRCDC is also currently supported by an eleven-member technical advisory committee and an eleven-member resource advisory committee, with capacity for 18 members. Many of the original members still serve on these committees – thank you long standing Council and committee members.

In July, we kicked off fiscal year 2008 with the Yellowstone River Boat Tour. Mr. John Paul Woodley, Jr., Assistant Secretary of the Army and nine other representatives from the US Army Corps of Engineers attended the tour during which we covered 20 miles of river in three hours stopping to view the Huntley Irrigation Diversion Dam and a bank stabilization project upstream near the confluence of the Clark's Fork. That day, Washington DC seemed a lot closer!

We also conducted the great Yellowstone River Clean-Up Project, removing nearly 10 tons of litter and debris from the banks of the Yellowstone River in all twelve counties. We got out on the ground to meet with our partners in eastern Montana, touring T&Y Dam, Intake Diversion Dam, the Yellowstone-Missouri River confluence, and the I-94 Bridge at Glendive. CD-sponsored Russian olive demonstration projects and participation at Montana's largest agricultural trade show helped give this plant a much deserved black eye. Even more impressive is the rate at which the technical studies continue to progress on a limited budget. We are finding that byproducts of the study, including the 310-Google database and Channel Migration Zone maps, can provide benefits for everyday folks living in the Yellowstone River basin. Our challenge in the coming year is getting the word out about these products so that citizens may reap these benefits.

In 2008, we forged new ground in the history of the Yellowstone River Conservation District Council. The YRCDC is now being recognized as model for grass roots leadership in environmental restoration as witnessed by the Water Resources Development Act of 2007. WRDA 07, Section 3110 specifically names the YRCDC in a thirty-million dollar authorization of appropriations for immediate and substantial ecosystem restoration and recreation benefits on the Yellowstone River.

The YRCDC's partnerships with public and private organizations, academia, and county, state and federal agencies remains critical to our success in the stewardship of the longest free-flowing river in the lower 48 states. For more information about specific component studies or topics of interest, readers may contact us at (406) 247-4411 or visit us on the website at http://dnrc.mt.gov/cardd/yellowstonerivercouncil.



Don Youngbauer
Chairman, Yellowstone River Conservation District Council

PART 1. Status of Component Studies

In 2004, the YRCDC and the Army Corps of Engineers entered into a cost-sharing agreement including a project management plan (PMP). The purpose of the PMP includes scheduling of work, internal and external coordination, to maintain teamwork, hold partners accountable, manage finances, maintain professional work quality, balance competing demands, meet milestones, and facilitate communication throughout the process for all interests. While executing the agreements, we are committed to being flexible and to utilizing efficient approaches consistent with law and policy, and to obtain results.

In fiscal year 2008, the YRCDC made progress on the following work elements of the PMP:

- Biological
- Hydrology/Hydraulics/Geomorphology
- Socioeconomic
- Information Management
- Best Management Practices
- Cumulative Effects Assessment
- Public Involvement

Photo courtesy, Jim Robinson

310 Permit Database

Principal Investigators:	Warren Kellogg (NRCS) LaVerne Ivie (Yellowstone CD) Tony Thatcher (DTM Consulting)
Other Participants:	YRCDC staff
PMP Work Element:	INFORMATION MANAGEMENT AND GIS DEVELOPMENT
Goal:	Develop a web-based database application for archiving and displaying 310 Permit information using Google Maps as a graphic interface. The interface will allow Conservation Districts internet access to their 310 permitting records, including both map and text interfaces.
Completion Date:	Ongoing development as additional Conservation Districts participate.
Product:	310 Web-Based Permit Database and Google Map interface
Comments:	The database contains 310-permit records beginning in 1976 that the Conservation Districts have entered into the database. Photos and descriptions accompany the Sites and Permits. Conservation Districts have the option of adding additional data layers such as, physical feature points and lines, bank lines, and floodplain boundaries from GIS format. The application is currently being used by 4 Conservation Districts, with additional CDs being added.

Avian Communities of the Middle and Lower Yellowstone River

Principal Investigators:	Danielle Jones Andrew Hansen Montana State University Bozeman, Montana
Other Participants:	Nature Conservancy, US Army Corps of Engineers, Yellowstone River corridor landowners, YRCDC
PMP Work Element:	ENVIRONMENTAL STUDIES: AVIAN COMMUNITIES
Goal:	Provide a general description of breeding bird communities and to explore the factors influencing the distribution and abundance of bird species along the

	length of the river.
Completion Date:	October 2008
Product:	In progress
Comments:	In 2006 and 2007, the YRCDC, in partnership with USCOE sponsored an investigation conducted by faculty and staff at MSU, Bozeman to carry out a survey of birds in selected habitat types along the river. Both field seasons have now been completed. Results are expected in the fall of 2008 and are expected to yield valuable information regarding riparian habitat condition.

Best Management Practices & Position Papers

Principal Investigators:	YRCDC, YRCDC TAC and RAC
Other Participants:	Weed Districts
PMP Work Element:	CUMULATIVE EFFECTS
Goal:	As resource information becomes available, BMPs and Position Papers pertinent to the Yellowstone River corridor will be developed.
Completion Date:	On-going
Product:	Russian Olive Management BMP; Intake Diversion/Fish Passage position paper; Glendive By-Pass Chute/Hydraulic Analysis position paper.
Comments:	BMPs and Position Papers are available at the YRCDC office in Billings.

Bridge Surveys

Principal Investigators:	Peter McCarthy (USGS)
Other Participants:	USGS, YRCDC, US Army Corps of Engineers
PMP Work Element:	CHANNEL AND FLOOD PLAIN HYDRAULICS
Goal:	To survey critical parameters of existing bridges spanning the Yellowstone River for use in the US Army Corps of Engineers hydraulic model.
Completion Date:	December 2007
Product:	Survey data provided to the ACOE for their hydraulic modeling
Comments:	All bridge surveys were completed as planned on the Yellowstone River. The purpose of the surveys was to assess a number of parameters such as bridge openings, location of the channel bottom, pier shapes, abutment types, flood levels if available (such as the 1996, 1997 floods), whether rip rap was present or not, and the height of the bridge deck (top and bottom). The water level upstream and downstream of the bridge was surveyed. This was critical information for the US Army Corps of Engineers to produce an accurate hydraulic model of the river.

Cultural Values Study

Principal Investigators:	Dr. Susan Gilbertz, Montana State University Cristi Horton, Co-Investigator, Tarleton State University Damon Hall, Co-Investigator, Boone & Crockett Fellow, Texas A&M University
Other Participants:	US Army Corps of Engineers, Yellowstone River corridor landowners, YRCDC.
PMP Work Element:	SOCIO-ECONOMIC STUDIES
Goal:	Document the variety and intensity of different perspectives and values held by people who share the Yellowstone River.
Completion Date:	Completed
Product:	Yellowstone River Cultural Inventory - 2006, Part I – V and Overall Summary
Comments:	Between May and November of 2006, 313 individuals participated in the

	study. They represented agricultural, civic, recreational, or residential interest groups. In addition, individuals from the Crow and the Northern Cheyenne tribes were included. There were three particular goals associated with the investigation. The first goal was to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts were made to document participants' views regarding the many different bank stabilization techniques employed by landowners. The second goal was to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal was to document concerns regarding the management of the river's resources. The Army Corps of Engineers printed 400 copies of the Summary and 250 copies of each segment for distribution by the local conservation districts. The reports can also be found online at http://dnrc.mt.gov/cardd/yellowstonerivercouncil/2006culturalinventory.asp . In FY2008, Dr. Gilbertz and YRCDC staff continued to give presentations to the public about the results of the study.

Cumulative Effects Assessment Database

Principal Investigators:	Tony Thatcher (DTM Consulting) Warren Kellogg
Other Participants:	YRCDC TAC
PMP Work Element:	INFORMATION MANAGEMENT AND GIS DEVELOPMENT
Goal:	Create a Microsoft Access database designed to store and display summarized results from individual scopes of work developed by CEA.
Completion Date:	Ongoing
Product:	Riparian and Cumulative Effects Databases
Comments:	The Riparian Scope of Work is expected to produce a large amount of information related to vegetative cover, land use, and conditions associated with the Yellowstone River. In order for this information to be useful for analysis, presentation, and integration with other work scopes, it will be stored in a structured format that preserves data integrity and serves as an archive of the information. A custom Microsoft Access database serves these functions and provides a flexible environment for data entry, archiving, analysis and integration. The riparian database has been completed. The cumulative effects database development is in-progress.

Channel Migration Zone Mapping

Principal Investigators:	Karin Boyd Tony Thatcher DTM Consulting/Applied Geomorphology
Other Participants:	YRCDC TAC, County floodplain administrators
PMP Work Element:	CHANNEL AND FLOOD PLAIN HYDRAULICS
Goal:	Develop a channel migration zone designation for the Yellowstone River from the southern Park County line to the Missouri River.
Completion Date:	July 2008
Product:	A series of county-level maps that delineate the Channel Migration Zone for the Yellowstone River from Sweet Grass County to the Missouri River. The maps will be supported by a report describing the applied methodology in detail, and presenting the results of the CMZ delineation.

Comments:	A series of county-level maps that delineate the Channel Migration Zone for the Yellowstone River from Sweet Grass County to the Missouri River. The maps will be supported by a report describing the applied methodology in detail, and presenting the results of the CMZ delineation. GIS data and documentation for the Channel Migration Zones. Comments: The Council approved this scope of work during the June 2006 meeting. Due to the high cost, floodplain mapping along the Yellowstone River is either nonexistent or roughly approximated. This lack of information makes it difficult to proactively manage the floodplain, particularly along the more rapidly developing upper segment (e.g., upstream of the Big Horn River). Using a variety of previously developed datasets, including historic aerial photography and digital elevation data, the Geomorphic Hazard Mapping Project will identify segments of the Yellowstone floodplain at risk of flooding and excessive erosion. The goal is to interpret past and current channel conditions in order to predict future channel behavior and identify areas at risk of rapid channel movement and/or flooding. The mapping will be conducted on a river corridor scale and is intended to provide a screening level tool for purposes of river corridor management, especially in areas where detailed floodplain mapping is financially unfeasible. The results can be potentially adopted as Enhanced Zone A flood boundaries and used to determine whether development interests should be required to perform detailed flood studies or channel migration zone evaluation prior to development.

Historical Aerial Photo Acquisition and Distribution

Principal Investigators:	Jim Robinson (Montana DNRC)
Other Participants:	YRCDC TAC, US Army Corps of Engineers
PMP Work Element:	BASIC DATA & TOPOGRAPHIC MAPPING
Goal:	Acquire historic aerial photographs of the Yellowstone River corridor to support cumulative effects assessment, 310 and 404 permit review, and land use planning.
Completion Date:	2007
Product:	Countywide, historic orthophoto mosaics of the Yellowstone River Corridor from 1930s, early 1950s, 1976-77, and 2001.
Comments:	Since its inception in 1999, the YRCDC has collected and made available through the Montana State Library's Natural Resource Information System (NRIS) a variety of geographic datasets specific to the Yellowstone River corridor, including historic aerial photography, high accuracy digital elevation models, and digitized plan metric feature datasets, such as a physical features inventory and geomorphic classification of the entire river (http://nris.mt.gov/yellowstone). Currently, complete aerial photographic coverage exists of the river corridor from Yellowstone National Park Boundary to the Missouri River confluence near three points in time: 1950/1976/2001; and sporadic coverage dating back to the 1930s. The photography will be used by the technical components of the cumulative effects assessment to characterize and evaluate past response to influences such as climate, hydro modification, and flood and erosion control structures.

High Resolution Orthophotography, LiDAR Topographic Data, Planimetric Feature Mapping

Principal Investigators:	Teresa Silence, Greg Johnson (US Army Corps) Jim Robinson, Laurie Zeller (Montana DNRC) Gerry Daumiller (Montana State Library)
Other Participants:	UYRTF, YRCDC, US Army Corps of Engineers, multiple private

	contractors, Montana State Library Natural Resource Information System
PMP Work Element:	BASIC DATA & TOPOGRAPHIC MAPPING
Goal:	Obtain and make available high resolution (30 cm) color orthophotos of the entire Yellowstone River corridor.
Completion Date:	Latest data collected October, 2007, final deliverables
Product (s):	County-wide orthophoto mosaics for all Yellowstone River counties in Montana and North Dakota available for download via the Montana State Library (http://nris.mt.gov/yellowstone)
Comments:	Acquisition and distribution of remotely sensed imagery and data have been part of the Yellowstone River baseline studies starting with Park County in 1999 (Surdex contract - UYRTF) and continuing in 2004 (Merrick contract – YRCDC) for Stillwater, Yellowstone and Dawson Counties, and ending in 2007 (Eisenbraun contract – US Army Corps) with the most recent collection in Sweetgrass, Treasure, Rosebud, Custer, Prairie, Richland, and McKenzie Counties. High resolution photography and high accuracy topographic data are key inputs to other aspects of the Yellowstone technical studies such as floodplain mapping and measuring historic channel change.

One-Time Funding: Demonstration Projects

Principal Investigators:	Laurie Zeller (Montana DNRC)
Other Participants:	Bureau of Reclamation, Montana Fish, Wildlife & Parks, Gallatin National Forest, YRCDC, Landowners
PMP Work Element:	**PUBLIC INVOLVEMENT**

a) Pryor Creek Fish Passage

Principal Investigators:	Brent Esplin (BOR) YRCDC TAC
Other Participants:	Montana Fish Wildlife & Parks, Yellowstone CD
Goal:	Develop an appraisal level design and estimate for constructing an inverted siphon on the Canal under Pryor Creek, grade control and fish passage on Pryor Creek and relocation of an inlet structure used to divert 15 cubic foot per second (cfs) from Pryor Creek into the Canal.
Completion Date:	Ongoing
Product:	Lower Pryor Creek Fish Passage Assessment Study Report (May 2007) and Pryor Creek Siphon and Fish Passage Report (July 2007).
Comments:	The purpose of this design report was to develop a feasibility evaluation and conceptual design and cost estimate for several alternatives for allowing fish passage on lower Pryor Creek. Further studies including water availability and fisheries are being conducted to help determine the feasibility of the project.

b) Cottonwood Regeneration Project

Principal Investigators:	Carol Endicott (FW&P) Park County CD
Other Participants:	Gallatin National Forest, Upper Yellowstone Watershed Basin, community volunteers
Goal:	Demonstrate the different methods of reestablishing cottonwood stands and documenting the benefits associated with Cottonwood stand reestablishment in riparian areas experiencing high mortality along the upper stretches of the Yellowstone River.
Completion Date:	2009

Product:	Three copies of a written narrative in final report form (electronic and printed copies) with photo-documentation of task progression.
Comments:	In the second year of the project, project participants harvested 1,000 cottonwood sprigs for rooting at the state nursery, and planted nearly 1,000 cottonwoods collected the previous year. Preliminary evaluations of success of the 2007 plantings indicated browse pressure from wildlife (ungulates and beavers) was substantial on the planted stems, and resulted in considerable mortality. Crews installed browse protectors with each sprig planted in 2008, and applied a wildlife repellent as a means to reduce browse related mortality. Extended high flows on the Yellowstone River in 2008 was another likely cause of mortality of sprigs planted in 2007 and 2008. A brochure detailing the ecology and benefits of cottonwoods will be available through the Park CD.

c) Locke Creek Fish Passage

Principal Investigators:	Carol Endicott, Montana Fish, Wildlife & Parks - Landowner Incentive Program/Yellowstone cutthroat trout restoration biologist
Other Participants:	Montana Fish, Wildlife & Parks, Park County CD, Locke Creek landowners, Montana Rail Link, Burlington Northern and Santa Fe Railway
Goal:	Implement minor modifications to a concrete culvert on Locke Creek located under the railroad to facilitate passage of Yellowstone cutthroat trout while impeding passage of non-native rainbow trout.
Completion Date:	2008
Product:	Written report (electronic and printed copies) including photo-documentation of task progression.
Comments:	This project has been modified from its original conceptual approach, which entailed simple alterations to the inside of the culvert to promote fish passage. These design modifications reflect maintenance concerns from the railroad companies operating on the tracks, and biological considerations relating to preventing passage of rainbow trout into Locke Creek. Specifically, instead of modifying the inside of the culvert with baffles, fish will gain access up to and through the culvert by installation of a series of step pools downstream of the culvert, which will also back water flows through the culvert. In addition, conceptual designs call for an alternate outfall from the culvert, which will be impassable. Flows will be diverted to the impassable route during the rainbow trout spawning period, but restored to the passable approach during the later Yellowstone cutthroat trout spawning period.

e) Salt Cedar Mapping Project

Principal Investigators:	Sweet Grass County Weed District
Other Participants:	Sweet Grass Conservation District; Custer County Conservation District
Goal:	Survey, map, and treat invested areas of the Yellowstone River fishing access sites in Sweet Grass County.
Completion Date:	October 2006
Product:	Maps of salt cedar infestations along the Yellowstone River and control efforts at six fishing access sites.
Comments:	Five people spent three days along the river in the fall of 2006 mapping salt cedar infestations and controlling weeds at six fishing access sites. Maps are available from the Sweet Grass Conservation District or the Sweet Grass County Weed District. Total project cost: $5,460.00.

Riparian Vegetation Study

Principal Investigators:	Warren Kellogg (NRCS)
Other Participants:	YRCDC, Yellowstone River corridor landowners.
PMP Work Element:	ENVIRONMENTAL STUDIES
Goal:	The primary purpose of the riparian characterization is to gain an understanding of the plant community composition, structure, and dynamics along the Yellowstone River riparian corridor, and to evaluate the interrelationships that the riparian plant community has with invasive plant species infestations, channel geomorphology, river hydraulics, and in-channel fish habitat.
Completion Date:	2009 (based upon funding availability)
Product:	Riparian mapping, Management Unit database and report
Comments:	Fieldwork began in 2007 that involved 7 counties along the Yellowstone River. There will need to be at least one more field season to collect data on all study reaches.

PART 2. Funding and Key Personnel

YRCDC Fiscal Year 2008 Financial Report

The following charts illustrate revenue (fig. 1) and expense (fig. 2) by category for the YRCDC in FY 2008.

Revenue & Expense by Category

Figure 1: Total Revenue by Category

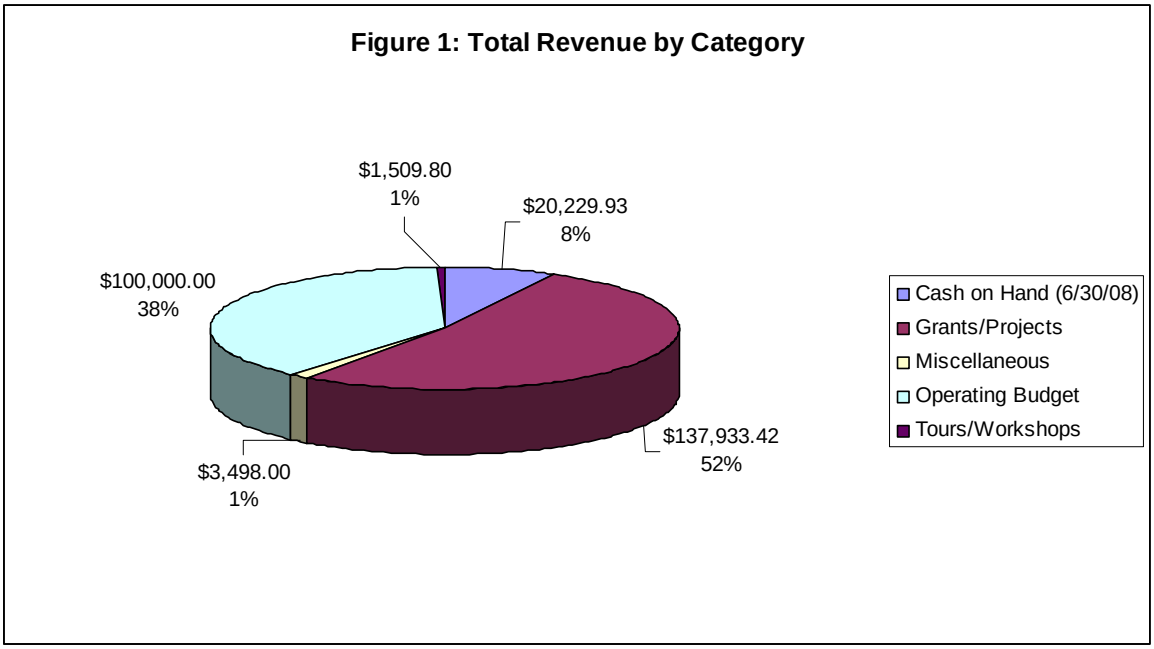
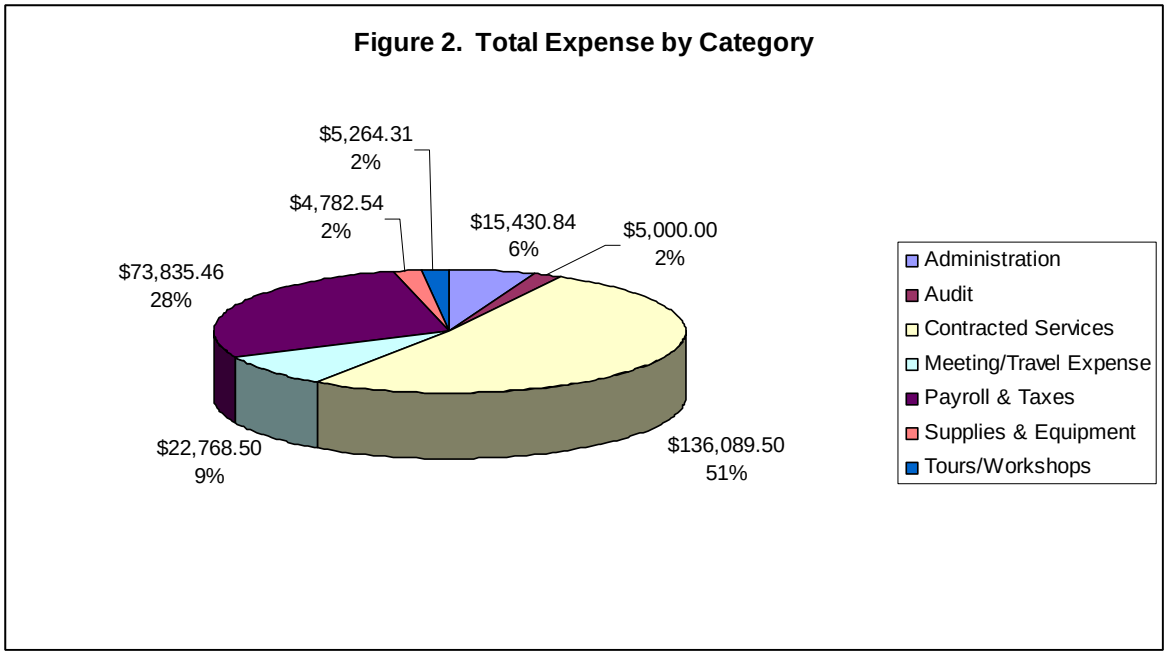


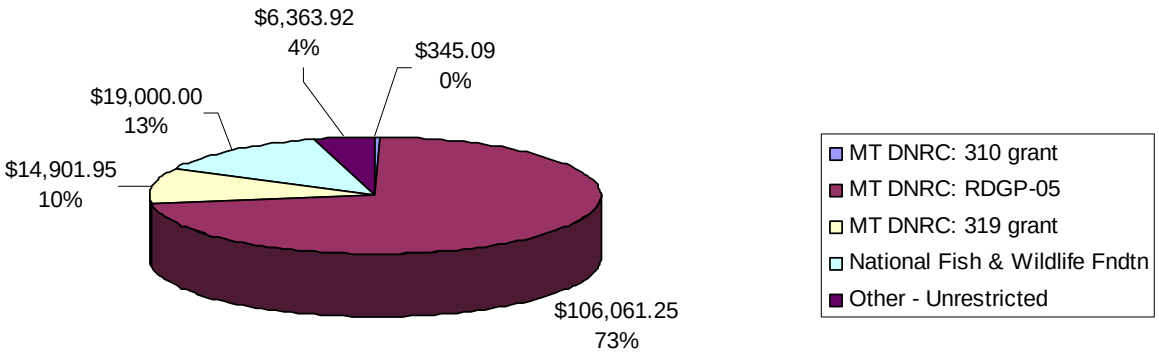
Figure 2. Total Expense by Category



Currently, the YRCDC is administering several different grant sources. The financial statement in Figure 3 is an accounting of each outstanding grant and funds remaining at the end of FY 2008. Figure 4 is a cost breakdown for the Army Corps of Engineers for Federal Fiscal Year 2008 (ended September 30, 2008).

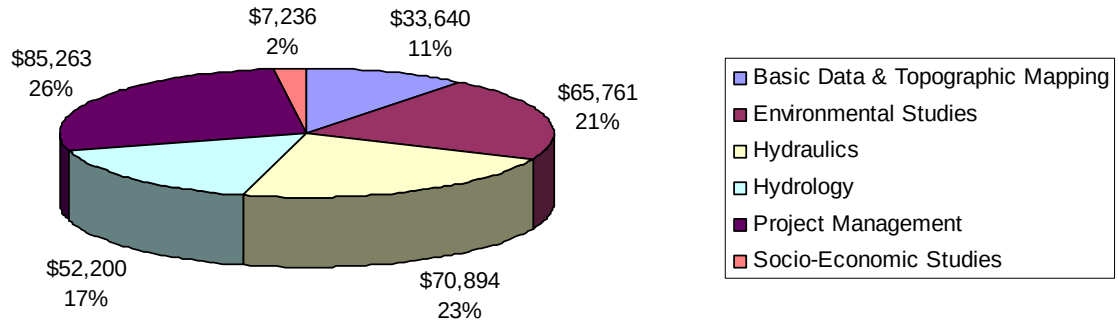
Financial Statement

Figure 3: Financial Statement



US Army Corp of Engineers – Federal Contribution

Figure 4: US Army Corps of Engineers - Federal FY 2008

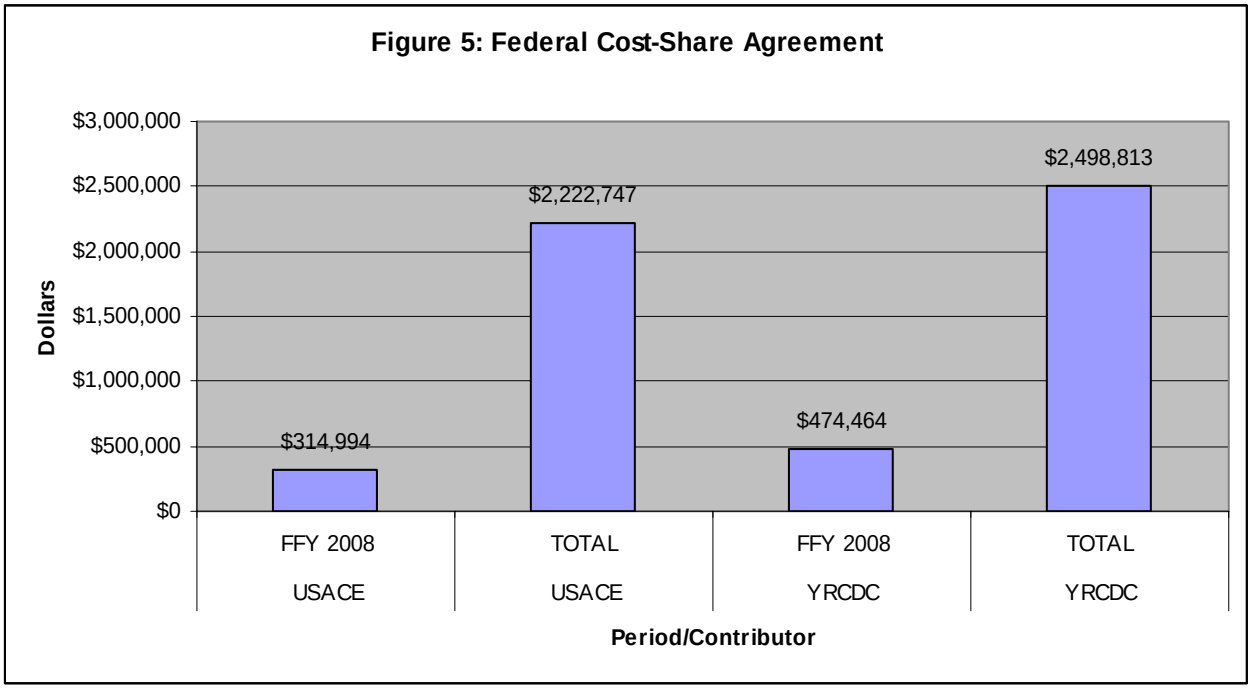


Federal Cost-Share Agreement

The YRCDC has established many partnerships that have resulted in considerable in-kind contributions by individuals, agencies, and organizations. These partnerships vary from private interest groups to ranchers and farmers who have graciously given of their time and talents.

This is a grassroots, locally-led effort to make voluntary management recommendations to constituents of a huge watershed. It is only possible through the cooperation and collaboration of the many interests throughout the watershed and the ready sharing of resources and information. Since the lands along the Yellowstone River are over 80 percent privately owned, it is paramount that the YRCDC have the cooperation of those landowners.

Partner contributions are summarized in the following table (fig. 5).



Key Personnel

Yellowstone River Conservation District Council

- Don Youngbauer, Chairman, Rosebud CD
- Bob Hector, Vice Chair, Yellowstone CD
- Dave Schwarz, Prairie County CD
- Jerry O'Hair, Park CD
- John Moorhouse, RAC Chair
- Kenny Nemitz, Dawson County CD
- Luther Waterland, MACD Representative
- Orvin Finsaas, McKenzie County, ND CD
- Paul Gilbert, Sweet Grass County CD
- Phil Fox, Treasure County CD
- Steve Story, Stillwater County CD
- Tony Barone, Richland County CD
- Walter Rolf, Custer County CD
- Will Alexander, Carbon County CD

Tony Barone and Carol Watts, June 2008

Technical Advisory Committee (TAC)

- Warren Kellogg, Chairman, NRCS
- Brent Esplin, Bureau of Reclamation
- Burt Williams, The Nature Conservancy
- Clayton Jordan, Bureau of Reclamation
- Dave Schwarz, Prairie County CD
- George Jordan, U. S. Fish & Wildlife Service
- Jim Robinson, MT DNRC Water Resources
- John Kilpatrick, USGS
- Karin Boyd, Applied Geomorphology, Inc.
- Ken Fraser, MT FWP
- Susan Gilbertz, Professor of Geography, MSU-B

Warren Kellogg at his retirement lunch – T&Y Diversion Dam, June 2008

Resource Advisory Committee (RAC)

- John Moorhouse, Landowner, Chairman
- Art Gehnert, Landowner
- Bill Kennedy, Yellowstone County Commissioner
- Boris Krizek, City of Billings Water Treatment
- Jerry Hanson, Landowner
- Kelly Duryea, BNSF
- Mack Cole, Landowner
- Richard Cayko, McKenzie County Commissioner
- Robert Lubbers, Yellowstone River Forum
- Roger Muggli, Landowner
- Scott Bosse, Greater Yellowstone Coalition

Yellowstone River Conservation District Council Staff

- Nicole McClain, Coordinator
- Carol Watts, Bookkeeper
- Kelly Norwood, Project Assistant

Kelly Norwood and Carol Watts, November 2007

US Army Corps of Engineers Team

- Greg Johnson, Lead Planner/Project Manager
- Eric Laux, Lead Biologist

(L-R) Greg Johnson and Don Youngbauer, August 2007

Other Agency Personnel/Advisors

- Laurie Zeller, Montana Department of Natural Resources and Conservation
- LaVerne Ivie, Yellowstone Conservation District
- Mike Volesky, Natural Resources Policy Advisor, Governor's Office
- Scott Bockness, Yellowstone County Weed Control District

(L-R) Bobbi Vannattan, Kelly Norwood, Nicole McClain, Laurie Zeller, and LaVerne Ivie, July 2007

Congressional Delegation Advisors

- Congressman Rehberg's office, Mary Heller, Regional Field Director
- Senator Baucus's office, Liz Ching, State Casework Manager
- Senator Tester's office, Rachel Court, Billings Field Representative

Karl Christians, DNRC – CARDD, and Liz Ching, Senator Max Baucus's Office, 2007

PART 3. Fiscal Year 2009

Financial Forecast

The amount of work that can be accomplished in any given year is dependent upon the federal allocation by Congress.

At publication time, the Senate had $500,000 in their version of the 2008 budget while the House had $200,000. The funding outcome will determine a more exact progress for FY2009.

Operating Expenses

Annual operating expenses, which are funded by the legislature and passed through DNRC, are estimated to exceed FY08 and FY09 levels due to rising costs, and increased activity. At publication time, the YRCDC was beginning to develop a work plan and a projected budget that would allow future development of Best Management Practices and the continuation of the Cumulative Effects Study in fiscal year 2009 and beyond.

Increased Costs

Mileage reimbursement rates and postage costs have sharply increased over original budget estimates. Mileage reimbursement is a major expense for the YRCDC and the reimbursement rate has increased approximately 20 percent in the past two years. More frequent YRCDC and RAC meetings are expected to increase the amount of pre-meeting and post-meeting mailing expenses. However, we are looking at creative ways to maintain costs including carpooling when possible, and teleconferencing.

Partner Commitments

Partnerships are essential to the success of the YRCDC. In unison with its RAC and TAC, we seek to continue the development of voluntary best management practices and implementation strategies for the Yellowstone River. This progress would not be possible without the commitment of our partners.

Water Resources Development Act

In 2007, the Water Resources Development Act was passed into law. The Yellowstone River faired quite well. WRDA-07 Section 3110, also known as Public Law 110-114, specifically names the Yellowstone River Conservation District Council in an authorization of appropriations of $30,000,000 for immediate ecosystem restoration and recreation benefits on the Yellowstone River and tributaries in Montana in North Dakota. The YRCDC and their RAC and TAC are beginning to develop an implementation strategy for the prioritization of projects under WRDA-2007, Section 3110.

Continuing Efforts

In FY 2008 and 2009, the Basic Data & Topographic Mapping scope of work, including Phase 2 of the LiDAR laser mapping project, will come to fruition after 5 years in process. During the next two years progress is expected on the Environmental Studies scope of work, which includes the fisheries research study, the wetlands study, and he NRCS riparian vegetation study.

Depending on federal funding, the geomorphology, hydrology, and hydrologic modeling in the Bighorn Basin and hydraulic modeling in Stillwater & Dawson Counties should be completed, as well as the scopes of work for bridge surveys, socioeconomics, information management & GIS, riparian fieldwork & the cumulative effects databases will continue to progress. All of the plans hinge upon continuing the cumulative effects study in a logical manner.

The YRCDC is currently planning a Rail Tour with the Army Corps of Engineers, Montana Rail Link and other partners in the fall of 2008. In late 2008, a roundtable is being planned to bring stakeholders on the river together to convey the state of the resource, what we've learned, unveil tools developed as byproducts of the study, and to begin to develop an implementation strategy for WRDA 2007, Section 3110.

YRCDC Council meeting, Yellowstone-Missouri River Confluence Interpretive Center, Fairview, MT

APPENDIX I: YRCDC History, Membership, & Protocol

History

The 676-mile Yellowstone River (Yellowstone) is the largest tributary to the Missouri River, draining 70,000 square miles of land in Montana, North Dakota, and Wyoming. Its mean annual discharge is 12,747 cfs, about 55 percent of the Missouri River's total water volume at the confluence. About half of the land area ultimately drained by the Yellowstone watershed lies in Wyoming while the Yellowstone River itself is contained almost entirely within Montana.

As a national resource, the Yellowstone is without parallel. The river originates in the nation's first national park, and remains the longest free-flowing river in the lower 48 states. It supports valuable aquatic and terrestrial species and natural communities. In addition to its ecological importance and scenic beauty, the Yellowstone supports a variety of agricultural, domestic, industrial, and recreational uses. These uses are of great economic and social importance, both to the nation, and the people who live along the river.

Increasingly, the Yellowstone has been the focus of growing ecological, economic, social, and political concerns. The 1996-1997 floods, which caused extensive erosion and sedimentation along some channel segments, brought focus on human intervention within the river channel. During this same time, the National Heritage Rivers initiative wanted to place a federal "river navigator" who would oversee all activities on the Yellowstone River. People perceived this as a departure from local control of resources to federal control. As a result, it was not received well.

Environmental and recreational interest was elevated regarding the long-term sustainability of the river as a public resource. A lawsuit was filed in Federal District Court. Because of the lawsuit, the court ordered the Corps of Engineers to review potential cumulative effects of projects submitted for 404-permit review. In response, Congress authorized the Cumulative Effects Study of the biological, hydrologic, and economics of the entire Yellowstone River in the 1999 Water Resources Development Act (WRDA).

In 1998, the eleven conservation districts bordering the Yellowstone River began meeting and began to document the physical features and conditions of the Yellowstone River. In 1999, the Yellowstone River Conservation District Council (YRCDC) was established and began meeting on a regular basis.

Yellowstone-Missouri River confluence.

Purpose

The purpose of the YRCDC is to provide local leadership, assistance, and guidance for the wise use and conservation of the Yellowstone River system's natural resources to sustain and improve the social, environmental, and economic values. The purpose is founded on the following fundamental precepts: 1) the need for sound scientific information on which to base management decisions; 2) the need for broad-based local, regional, and national input, to define a shared vision that will provide a foundation for resolving issues; 3) the need for technical and financial assistance to address sustainable use issues on the Yellowstone River; 4) the need to establish constructive dialog with all users and stakeholders; and 5) the need to educate and inform the public to create a vision for the future of the river.

The YRCDC has focused on the following points which are central to the conservation districts bordering the Yellowstone River and vital to all its stakeholders: 1) bank stabilization (310 issues); 2) irrigation water impacts, availability, and water reservations; 3) livestock, grazing, and farming issues; 4) water quality and stream impairment; 5) recreational uses of the river and the floodplain; 6) municipal and domestic water needs and impacts; 7) scenic and aesthetic values of the river corridor.

Conservation districts are political subdivisions of state government with full power and authority to participate in issues relating to soil and water conservation. Conservation districts are specifically given authority under 76-15-101 through 76-15-810.

The specific statute (76-15-318), which authorizes cooperation among conservation districts, states "the

supervisors of any two or more districts organized under the provisions of this chapter may cooperate with one another in the exercise of any or all powers conferred in this chapter".

Limitations on efforts are found in 76-15-401(2) which states "In order to avoid duplication of research activities, no district shall initiate any research program except in cooperation with the government of this state or any of its agencies or with the United States or any of its agencies."

In 2004, the YRCDC signed a cost share agreement, with the Corps of Engineers, to carry out a cumulative impacts study to be funded by 75 percent federal and 25 percent local money.

Membership and Protocol

Initially, the YRCDC consisted of the eleven conservation districts, which border the Yellowstone River in Montana and a representative from the Montana Association of Conservation Districts (MACD). Later, McKenzie County in North Dakota was added as a voting member. In early 2006, the chair of the Resource Advisory Committee (RAC) was added as a voting member.

The YRCDC elects a chair and vice chair, each from opposite ends of the river (upper and lower). Elections take place in July to coincide with the fiscal year.

Business is conducted by consensus whenever possible. If a minority (one or two) is opposed to a particular action, a formal motion and vote will ensue. If the vote is split or close to split, the subject is tabled until, more discussion and compromise can be employed.

Being elected officials, conservation district members are well suited to represent their county constituencies in matters related to the Yellowstone River. Their interest is in representing all stakeholders equally along the river corridor.

Russian olive management demonstration at the Cole Ranch in Hysham, Montana, November 2007.

APPENDIX II: Cumulative Effects Study

Study Authority

The Cumulative Effects Study was authorized by Section 431 of the Water Resources Development Act of 1999. The Act called for the U.S. Army Corps of Engineers to conduct a study to determine the hydrologic, biological, and socio-economic cumulative impacts on the Yellowstone River from Gardiner, Montana, to the confluence with the Missouri River. The Act required consultation with the U.S. Fish and Wildlife Service, U.S. Geological Survey, Natural Resources Conservation Service, and Montana, tribal, and local entities. The results were to be reported to Congress within five years of enactment; however, the lack of federal funding has impeded the study progress.

Photo courtesy of Warren Kellogg

Project Management Plan and Feasibility Study

A Feasibility Study Report (a blueprint for how the federally mandated cumulative effects study will be conducted) for the Yellowstone River recommended a cumulative effects study for the river corridor to address important hydrologic, socio-economic, and biological issues. These were beyond the capability of state and local interests to resolve, given the existing circumstances, conflicts, and complexity regarding water and related land resource issues in the two-state, multi-county region. This Feasibility Study Report was approved by the U.S. Army Corps of Engineers (Corps) Headquarters on August 13, 2003.

Through a number of public meetings sponsored by the conservation districts along the Yellowstone River, information regarding the need to proceed with the cumulative effects study was provided by local landowners, interested environmental and industry groups, as well as a variety of federal, state, and local agencies. The analysis of the information gathered indicated the study should proceed with a goal of comprehensive analysis of past, present, and likely future impacts. The result should be recommendations that will enable local, state, and federal interests to manage the sustainable use of the Yellowstone River's resources.

A Project Management Plan (PMP) was developed jointly by the Corps, the Yellowstone River Conservation District Council (YRCDC), and its partners. This plan of work defines the scope and conduct of the cumulative effects study. Specifically, it covers study authority, organization, the scope of the study, schedule, communication, change control, quality control, contracting, budgets, financial monitoring, and auditing.

The cost of the cumulative effects study is estimated to be $5.8 million. The cumulative effects study report will provide a complete presentation of the study analysis and results. It will document compliance with all applicable federal, state, and local statutes, executive orders, and policies. This product (report) may be ultimately used by Congress if additional studies or federally authorized and funded projects are recommended. The YRCDC intends to use the information to develop voluntary management practices (VMPs) for use by conservation districts, federal and state agencies, and the State of Montana.

In 2004, the Custer County Conservation District, on behalf of the YRCDC, entered into a $5.8 million cost-share agreement with the Corps of Engineers to complete the study. This agreement incorporates the work outlined in the PMP and provides that costs will be shared on a 75 percent federal, 25 percent local basis. As mentioned earlier in the report, federal financial support has been lacking, impeding project progress; however, overwhelming financial, technical, and political support has come from federal agencies in Montana, state and local agencies, local landowners, and interest groups.

Study Area Congressional Districts

The study area extends along the Yellowstone River valley from Gardiner, Montana, at the northern boundary of Yellowstone National Park, to its confluence with the Missouri River in McKenzie County, North Dakota. Montana's Congressional delegation is made up of Senators Max Baucus and John Tester and Representative Dennis Rehberg. North Dakota's Congressional delegation is made up of Senators Kent Conrad and Byron Dorgan, and Representative Earl Pomeroy.

Don Youngbauer, YRCDC Chairman, and John Paul Woodley, Jr. Asst Secretary of the U.S. Army Corps of Engineers. Photo courtesy: Sarah Carlson

Approach to Cumulative Effects Study

Study area goals and objectives were identified by the Corps through consultation with YRCDC and its constituent conservation districts and cooperation with federal and state agencies and local interests in the Yellowstone area. General goals include anticipating and planning for future hazards, disasters, and needs; applying new information as it becomes available; and maintaining focus on issues and concerns along the river's main-stem. In addition, relevant information and data needs to be gathered to develop voluntary best management practices (VBMPs) for future river management.

Goals to be addressed in the study are listed below. Specific tasks following the goals are part of the PMP.

- Developing a Geographic Information System (GIS) computer database for the Yellowstone River corridor that can be used by agencies and special interest groups to support ongoing programs and missions. Major task groupings include:

- Conducting hydrologic, hydraulic, geomorphic, and biological baseline studies to better understand the functioning of the fluvial and ecological dynamics of the river;
- Posting interim and final results of mapping efforts and studies on the Montana State Library, Natural Resource Information System (NRIS) Yellowstone River Corridor web page to make them available to agencies, and special interest groups;
    - conducting socio-economic and land use baseline studies to develop information on river demands, preferences, and effects of various user groups; and
    - defining gaps in technical knowledge and conduct studies of river uses to determine future levels of sustainability.

- Conducting cumulative assessment and trend studies to better understand how the infrastructure (including bank stabilization, bridges, and other man-made structures) interacts with the existing river channel structure and functions.
- Completing studies and produce technical reports on hydrology, hydraulics, geomorphology, water quality, biological resources**,** socio-economics, and other areas as needed.
- Examining and analyzing measures for river management that improve the projected future condition including:
    - developing a river-focused voluntary management practices manual,
    - utilizing existing programs for planning and incentive–based strategies to more efficiently conserve resources and encourage wise development to sustain agriculture, fish and wildlife resources,
    - adapt infrastructure to better maintain proper river function; and
    - restore aquatic and wetland habitats.
- Involving federal and state agencies, local entities, stakeholders, members of Congress, and citizens in the study process including:
    - open meetings, special public meetings, tours of sites, media notices, and draft reports.
- Completing a feasibility report and making it available to agencies and the public by posting the report, all appendices, and study products on the Yellowstone River Corridor resource page on the Montana Natural Resource Information System (NRIS) web site and on the YRCDC web site:
    - http://www.dnrc.mt.gov/cardd/yellowstonerivercouncil/default.asp

Appendix III: Partnerships

Partnerships

The YRCDC acknowledges the importance of partnerships, which have been developed since its inception. The study area covered is immense with many diverse groups having interests in topics specific to certain portions of the river. This undertaking is truly a ground roots effort with representation from every county along the river and virtually every special interest group.

Early on, it was agreed that we could disagree. From that point, relationships have grown and the YRCDC is very concerned with representing all points of view on the river. These relationships not only include diverse groups, but many agencies (some of which are regulatory) and academics who have committed to the locally led effort.

When undertaking a study of this magnitude, it is necessary to understand the social relationships that determine how the efforts will be accepted. By having the conservation districts involved in each county, the effort takes on a local flavor with landowners being approached by other landowners and people in their community they have known for an extended period.

The feedback is honest and straightforward making the acceptance of the end product – voluntary management practices, a much more realistic goal. Without the cooperation of the landowners, very little could be accomplished, as 80 percent of the lands along the Yellowstone River are privately owned. Our partners include the following:

Carbon Conservation District
606 West Front Ave, PO Box 510
Joliet, MT 59041
Phone: (406) 962-3641

Custer County Conservation District
3120 Valley Drive East
Miles City, MT 59301
Phone: (406) 232-7905 ext. 3

Dawson County Conservation District
102 Fir Street FP
Glendive, MT 59330
Phone: (406) 377-5566

Park Conservation District
5242 Highway 89 South
Livingston, MT 59047
Phone: (406) 222-2899

Prairie County Conservation District
410 East Spring, PO Box 622
Terry, MT 59349
Phone: (406) 635-5381

Richland County Conservation District
HCR 89, Box 5165A
Sidney, MT 59270
Phone: (406) 433-2103

Rosebud Conservation District
270 South Prospect St, PO Box 1200
Forsyth, MT 59327
Phone: (406) 346-7479

Stillwater Conservation District
334 North 9th St, PO Box 48
Columbus, MT 59019
Phone: (406) 322-5359

Sweet Grass Conservation District
Hwy 10 East – PO Box 749
Big Timber, MT 59011
Phone: (406) 932-5160

Treasure County Conservation District
PO Box 288
Hysham, MT 59038
Phone: (406) 342-5510 ext. 3

Yellowstone Conservation District
1371 Rimtop Drive
Billings, MT 59105
Phone: (406) 247-4420

McKenzie County Conservation Dist.
109 5th Street SW, Box 583
Watford City, ND 58854-0583
Phone: (701) 842-3628

The United States Army Corps of Engineers (ACOE) was thrust into the position of having to conduct a cumulative effects study as ordered by federal district court.

Since the conservation districts also are responsible for administering the 310 permits in Montana (in addition to the ACOE's 404 permits), they felt the need to be involved. As a result, the YRCDC and the ACOE signed a cost share agreement in 2004.

Greg Johnson serves as principal investigator, and represents the ACOE's on the TAC. Eric Laux, ACOE Lead Biologist, serves in an advisory capacity to the TAC. The majority of the federal funds for the cumulative effects study are channeled through the ACOE's budget.

Montana Department of Natural Resources & Conservation (DNRC), Conservation and Resource Development Division (CARDD) was instrumental in the formation of the YRCDC.

Ray Beck and Laurie Zeller played a vital role by providing support for the technical, financial, and staff support that was required to bring the council together. They continue to provide outstanding staff support and manage the pass-through funds for the YRCDC's operation expenses. CARDD also provides the majority of grant funding for executing the YRCDC's study plan.

Warren Kellogg, recent NRCS retiree and YRCDC TAC Chairman, continues to provide crucial support as a Watershed Specialist provided by funding through CARDD.

DNRC Water Resource Division (WRD) has also been very active providing a geo-hydrologist very early after the YRCDC was formed. Jim Robinson continues in that capacity and is a valued member of the TAC.

For more than sixty years, the Montana Association of Conservation Districts (MACD) has been contributing to the success of CDs all across Montana. Created in 1942, MACD is a private nonprofit association, governed by a statewide Board of Directors.

Area 4 Director, Don Youngbauer of Forsyth, Montana, and Area 2 Director Tony Barone of Sidney, Montana represent MACD on the YRCDC. Sarah Carlson, Executive Director, works with the National Association of Conservation Districts (NACD) to influence the activities of federal agencies and Congress.

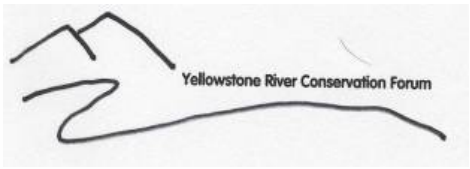
Montana Fish, Wildlife & Parks and YRCDC share a commitment to help sustain the Yellowstone River's diverse fish, wildlife and parks resources and the quality recreational opportunities that are essential to a high quality of life in Montana.

Ken Fraser, Fisheries Biologist, is a member of our TAC and is actively engaged in the fisheries scope of work.

The support of the Nature Conservancy has been instrumental to the success of the YRCDC. Burt Williams played a vital role in developing the YRCDC's resource advisory council (RAC) and is currently a member of the TAC.
The Nature Conservancy has also actively lobbied on behalf of the YRCDC for essential federal funding.

The United States Geological Survey (USGS) sits in an advisory capacity on the TAC. John Kilpatrick, USGS Hydrologist, is currently involved in conducting bridge surveys for the ACOE. This information is then used for hydraulic modeling by the ACOE.

The US Fish, Wildlife Service is another federal agency, which has been involved with the YRCDC since the very beginning. George Jordan, Yellowstone River Coordinator, is USFWS's current representative on the TAC and has been actively involved in matters concerning fish passage and other fish related issues.



The Yellowstone River Conservation Forum (Forum) is a network of 23 confirmed member conservation and recreation groups with ties to the Yellowstone River. Robert Lubbers represents the Forum on the RAC and is actively involved in the YRCDC's work.

Mike Penfold and the Yellowstone River Forum assisted the YRCDC early on, drafting the original standing rules, goals, and vision of the YRCDC. They have been a partner since the beginning and their input is greatly appreciated.